

WHAT IS CLAIMED IS:

1. A correction table forming method for forming
correction tables used in a color image forming
apparatus having a color scanner and a color printer,
5 wherein prestored correction data corresponding to
plural colors is read out, color signals are generated
at predetermined screen angles for the respective
colors including black by using the correction data
corresponding to the plural colors and printed out on
10 a sheet by the color printer of the color image forming
apparatus, the printed sheet is read by the color
scanner of the color image forming apparatus, the read
image data is converted to color signals, read data
is calculated from the converted color signals,
15 the calculated read data and the correction data
corresponding to the plural colors are compared and
calculated to form correction tables of the respective
colors including black, prestored correction data
corresponding to mono-color black is also read out,
20 color signals are generated at a screen angle
corresponding to the mono-color black by using the
correction data corresponding to the mono-color black
and printed out on a sheet by the color printer of the
color image forming apparatus, the printed sheet is
25 read by the color scanner of the color image forming
apparatus, the read image data is converted to color
signals, read data is calculated from the converted

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color signals, the calculated read data and the correction data corresponding to the mono-color black are compared and calculated to form a correction table of the mono-color black, and an error correction table is formed from the correction table of black included in the correction tables of the respective colors and the correction table of the mono-color black.

2. A correction table forming method for forming correction tables used in a color image forming apparatus having a color scanner and a color printer, wherein prestored correction data corresponding to plural colors is read out, color signals including a first black and a second black are generated at predetermined screen angles for the respective colors including a screen angle for the first black and a screen angle for the second black, which differs from the screen angle for the first black, the color signals are printed out on a sheet by the color printer of the color image forming apparatus, the printed sheet is read by the color scanner of the color image forming apparatus, the read image data is converted to color signals, read data including the first black and second black is calculated from the converted color signals, the calculated read data including the first black and second black and the correction data corresponding to the plural colors are compared and calculated to form correction tables of the respective colors including

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the first black and second black.

3. An image forming apparatus comprising:

read means for reading an image on an original;

conversion means for converting image signals read
5 by the read means to color signals;

memory means for prestoring correction tables of
colors including black and an error correction table of
a mono-color black;

10 setting means for setting a type of the original
read by the read means and specifying whether the
original is of a full-color mode or a mono-color black
mode;

15 first correction means for correcting, when the
setting means has set the full-color mode, the color
signals converted by the conversion means, using the
correction tables of the respective colors including
black stored in the memory means;

20 second correction means for correcting, when
the setting means has set the mono-color black mode,
the color signals converted by the conversion means,
using the correction tables of the respective colors
including black stored in the memory means, and further
correcting the corrected color signals using the error
correction table of the mono-color black stored in the
25 memory means; and

image forming means for forming an image based on
the color signals corrected by the first or second

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correction means.

4. A color image forming apparatus according to claim 3, wherein the image signals read by the read means are red, green and blue signals.

5. A color image forming apparatus according to claim 3, wherein the color signals converted by the conversion means are cyan, magenta and yellow.

6. A color image forming apparatus according to claim 3, wherein the color signals corrected by the first correction means are cyan, magenta and yellow of the color signals converted by the conversion means, and black generated from these color signals.

7. An image forming apparatus comprising:
read means for reading an image on an original;
conversion means for converting image signals read by the read means to color signals;

memory means for prestoring correction tables of colors formed at predetermined screen angles for the colors including a first black, and a correction table of a second black formed at a screen angle different from the screen angle of the first black in the correction tables of the respective colors;

setting means for setting a type of the original read by the read means and specifying whether the original is of a full-color mode or a mono-color black mode;

first correction means for correcting, when the

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setting means has set the full-color mode, the color signals converted by the conversion means, using the correction tables of the respective colors including the first black stored in the memory means;

5 second correction means for correcting, when the setting means has set the mono-color black mode, the color signals converted by the conversion means, using the correction table of the second black stored in the memory means; and

10 image forming means for forming an image based on the color signals corrected by the first or second correction means.

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